FIG. 1

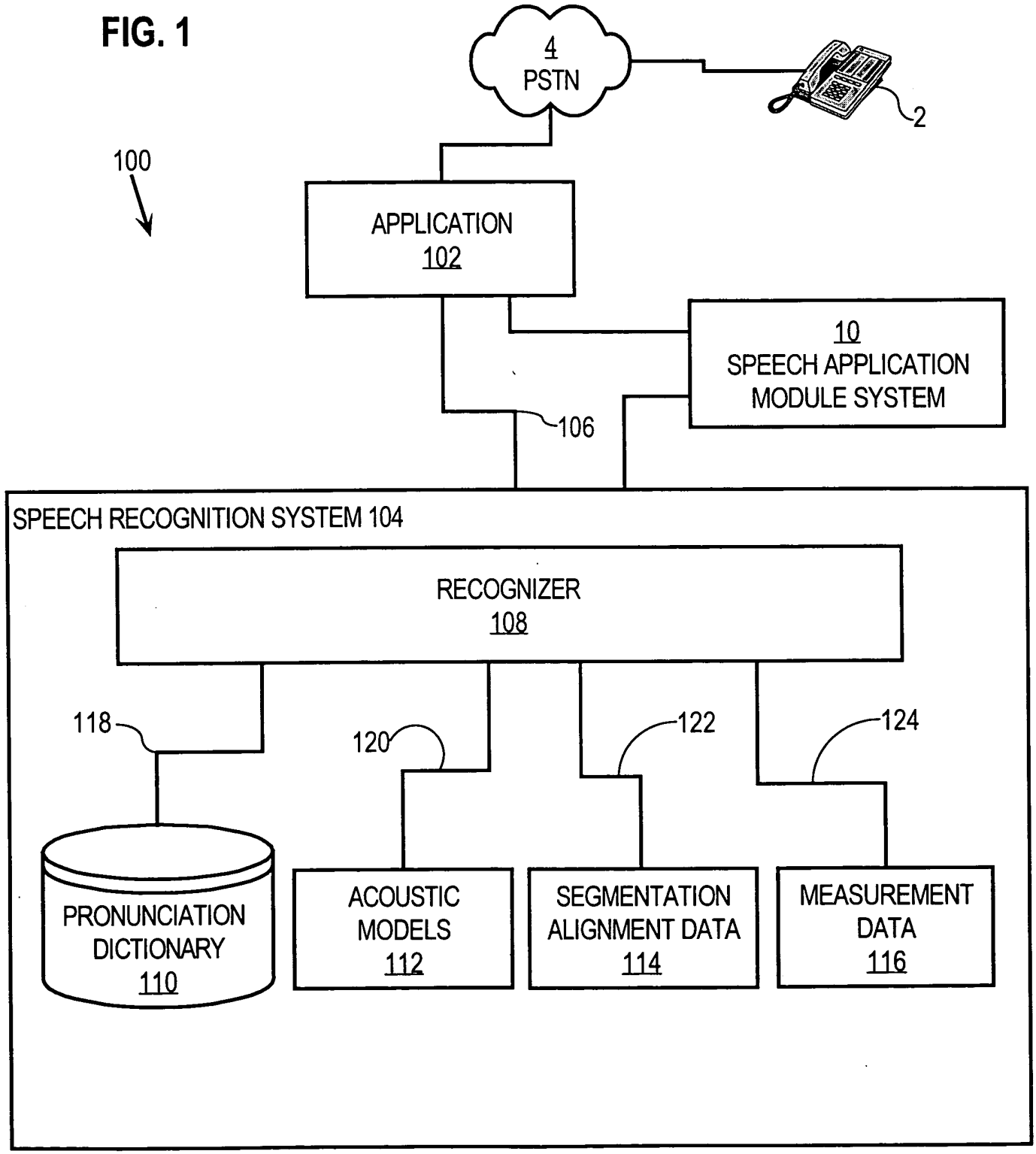

4
PSTN
2
100
APPLICATION
102
10
SPEECH APPLICATION
MODULE SYSTEM
106
SPEECH RECOGNITION SYSTEM 104
RECOGNIZER
108
118
120
122
124
PRONUNCIATION
DICTIONARY
110
ACOUSTIC
MODELS
112
SEGMENTATION
ALIGNMENT DATA
114
MEASUREMENT
DATA
116

FIG. 2A

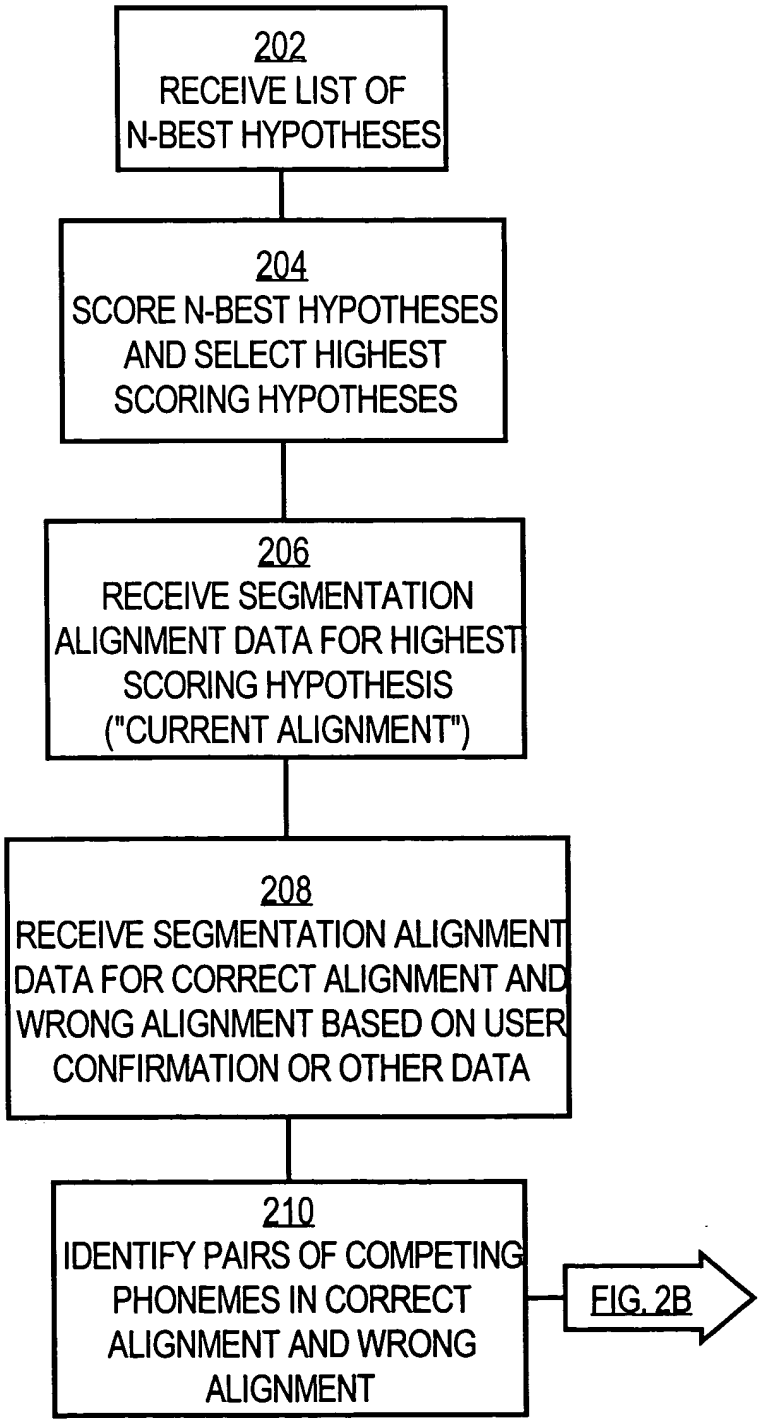

202
RECEIVE LIST OF N-BEST HYPOTHESES
204
SCORE N-BEST HYPOTHESES AND SELECT HIGHEST SCORING HYPOTHESES
206
RECEIVE SEGMENTATION ALIGNMENT DATA FOR HIGHEST SCORING HYPOTHESIS ("CURRENT ALIGNMENT")
208
RECEIVE SEGMENTATION ALIGNMENT DATA FOR CORRECT ALIGNMENT AND WRONG ALIGNMENT BASED ON USER CONFIRMATION OR OTHER DATA
210
IDENTIFY PAIRS OF COMPETING PHONEMES IN CORRECT ALIGNMENT AND WRONG ALIGNMENT
FIG. 2B

FIG. 2B

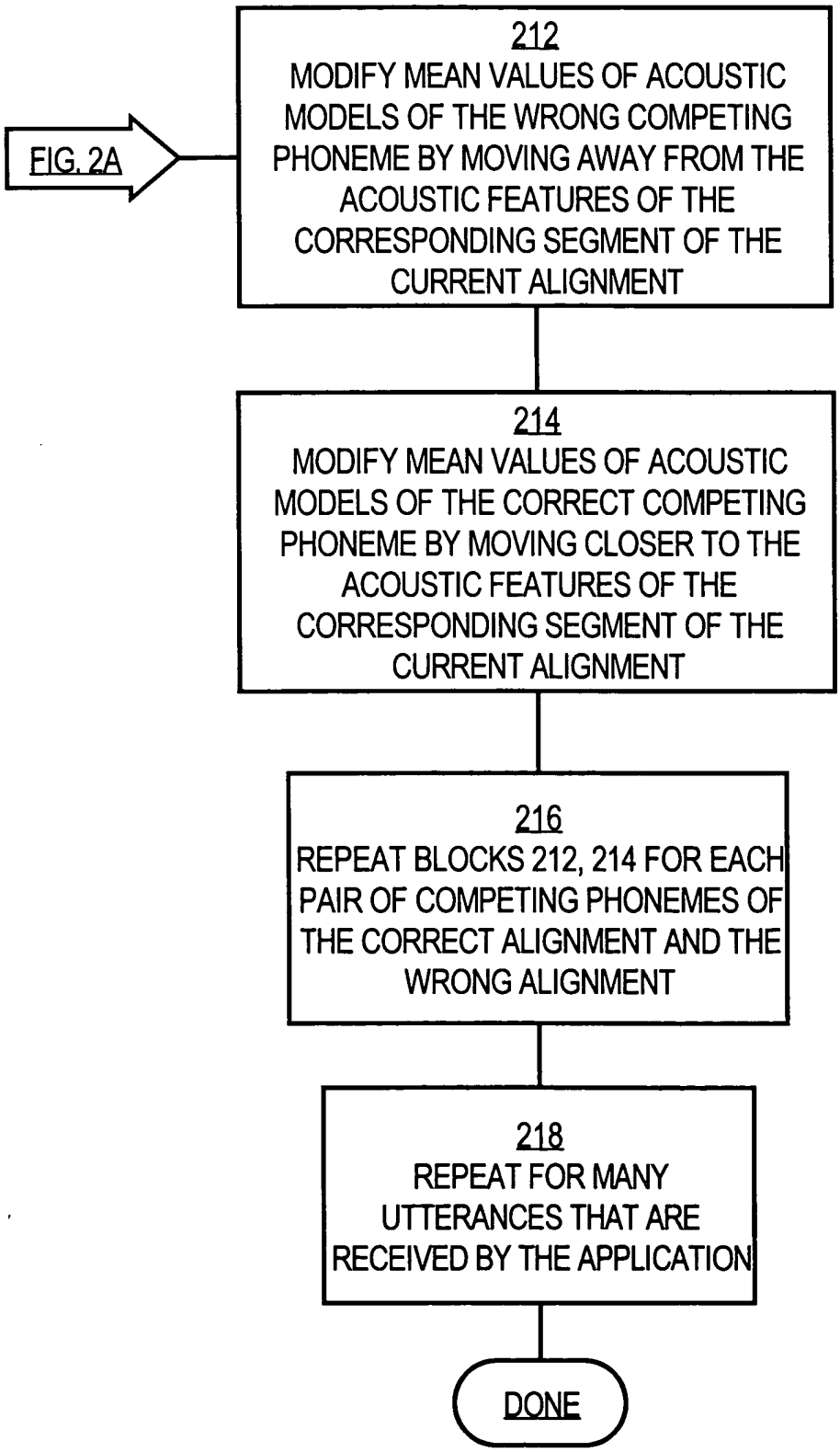


FIG. 2A
212
MODIFY MEAN VALUES OF ACOUSTIC MODELS OF THE WRONG COMPETING PHONEME BY MOVING AWAY FROM THE ACOUSTIC FEATURES OF THE CORRESPONDING SEGMENT OF THE CURRENT ALIGNMENT
214
MODIFY MEAN VALUES OF ACOUSTIC MODELS OF THE CORRECT COMPETING PHONEME BY MOVING CLOSER TO THE ACOUSTIC FEATURES OF THE CORRESPONDING SEGMENT OF THE CURRENT ALIGNMENT
216
REPEAT BLOCKS 212, 214 FOR EACH PAIR OF COMPETING PHONEMES OF THE CORRECT ALIGNMENT AND THE WRONG ALIGNMENT
218
REPEAT FOR MANY UTTERANCES THAT ARE RECEIVED BY THE APPLICATION
DONE

FIG. 3

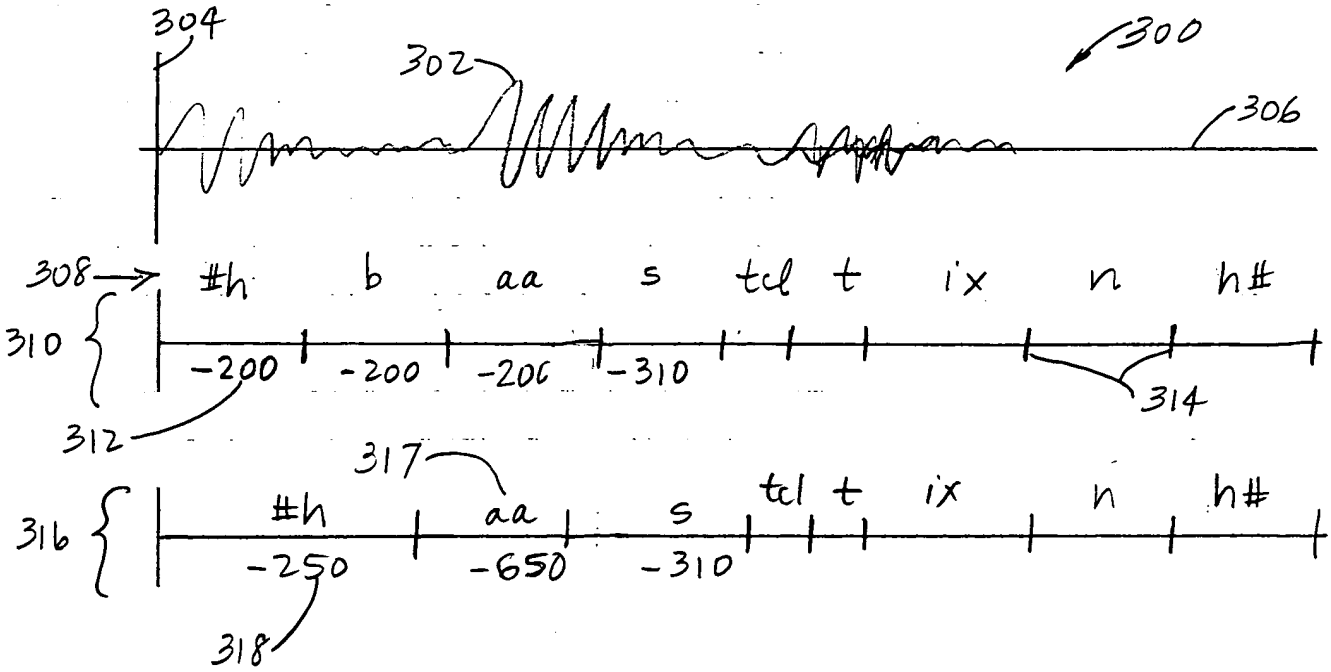
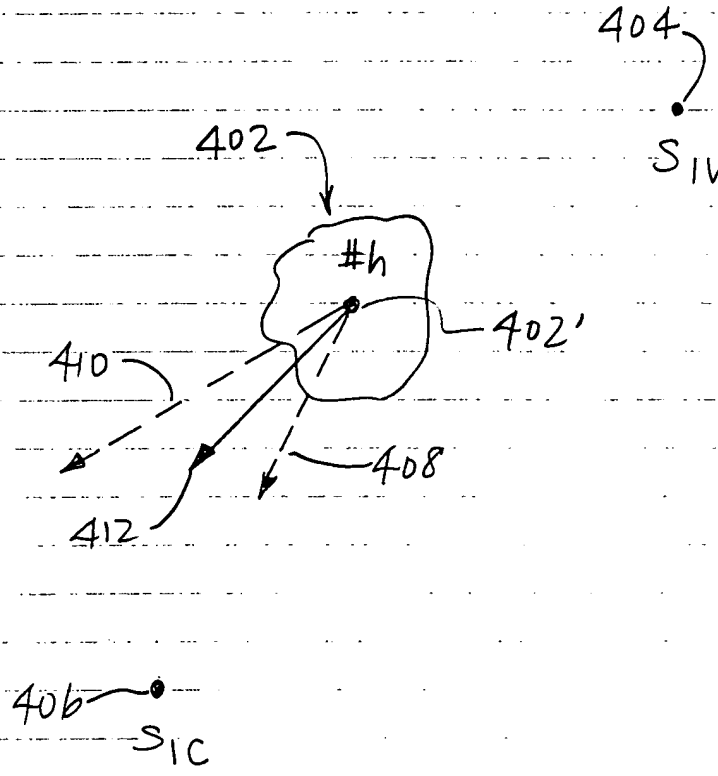

304
302
300
306
308
#h b aa s tcl t ix n h#
310
-200 -200 -206 -310
312
314
317
316
#h aa s tcl t ix n h#
-250 -650 -310
318

FIG. 4



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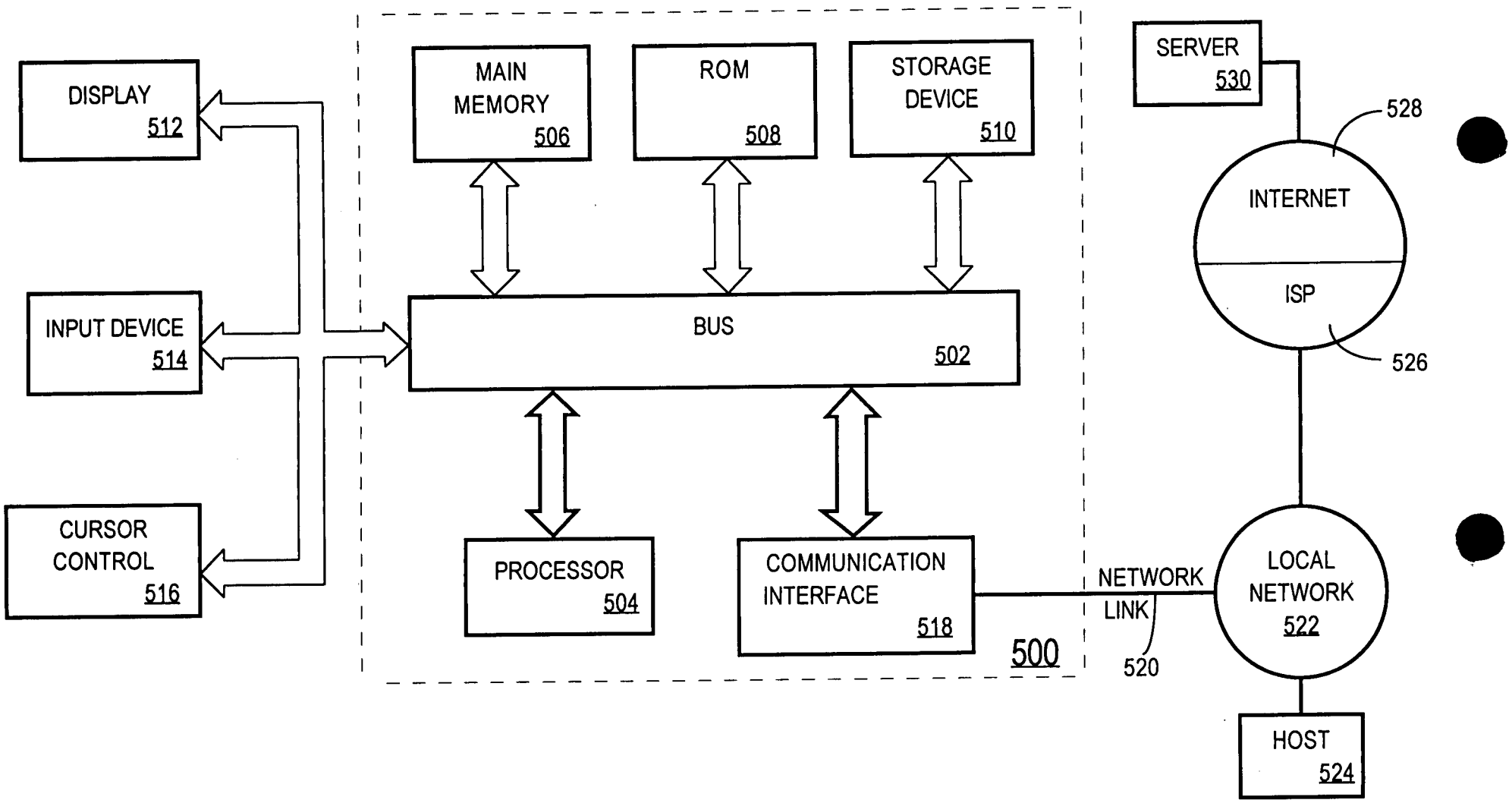
FIGURE 5